609IHSSF1099

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Site Name CLAYTON FARMS

DocumentType Ranking (RANK)

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Box SF1099

AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY

Print Form

INACTIVE SITES RANKING SYSTEM
SUMMARY SHEET

Site Name: Clayton Farms

Location: 1833 Loop Road

ID Number: NONCD0002852

Ranked By: John Walch Date: 07/7/2011

Reviewed By: Keith Snavely Date: 7/7/2011

Site Description/Comments:

The site is a former DuPont crop protection chemical testing farm used from 1954 until the mid-1980's. The facility was used to pilot test agriculture products on row crops according to DuPont. The site has subsequently been used as a tobacco farm. Pesticides have been detected in soil and groundwater at concentration above Branch remedial goals.

*** This site ranking supersedes any previous site ranking performed on this site.

Route Scores: GW = 69.84 SW = 60.53 A = 0 P = 21

Total Score: $\frac{((69.84)^2 + (60.53)^2 + (0)^2 + (21)^2)^{1/2}}{2} = \mathbf{47.38}$

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I. GROUND WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Choose One)	Score
A. Route Characteristics		
1. Depth to Water Table	0 2 4 6 **8** 10	8
2. Net Precipitation	0 1 **2** 3	2
3. Hydraulic Conductivity	0 1 **2** 3	2
4. Physical State	0 1 2 **3**	3
	Total Route Characteristics Score	15
B. Containment	0 1 2 3	3
C. Waste Characteristics		
1. Toxicity/Persistence	0 3 6 9 12 15 **18**	18
2. Hazardous Waste Quantity	0 1 2 3 4 **5** 6 7 8	5
	Total Waste Characteristics Score	23

Ground Water Route of Migration Score

The Ground Water Route of Migration Score is obtained by multiplying lines A, B, and C and dividing this by 14.82 to give a score between 0 and 100.

Total Ground Water Route of Migration Score: 69.84

II. SURFACE WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Choose One)	Score
A. Route Characteristics		
1. Facility Slope and Intervening Terrain	(0) 1 2 3	0
2. 1-yr., 24-hour Rainfall	0 1 (2) 3	2
3. Distance to Nearest Surface Water	0 2 4 6 (8) 10	8
4. Physical State	0 1 2 (3)	3
	Total Route Characteristics Score	13
B. Containment	0 1 2 (3)	3
C. Waste Characteristics		
1. Toxicity/Persistence	0 3 6 9 12 15 (18)	18
2. Hazardous Waste Quantity	0 1 2 3 4 (5) 6 7 8	5
	Total Waste Characteristics Score	23

Surface Water Route of Migration Score

The Surface Water Route of Migration Score is obtained by multiplying lines A, B, and C and dividing this by 14.82 to give a score between 0 and 100.

Total Surface Water Route of Migration Score: 60.53

III. AIR ROUTE WORK SHEET

Rating Factor	Assigned Value (Choose One)	Score
A. Waste Characteristics		
1. Reactivity and Incompatibility	0 1 2 3	
2. Toxicity	0 3 6 9	
3. Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	
	Total Waste Characteristics Score	
B. Targets		
1. Population Within a 4-Mile Radius	0 9 12 15 18 21 24 27 30	
2. Distance to Sensitive Environment	0 2 4 6	
3. Land Use	0 1 2 3	
	Total Targets Score	

Air Route of Migration Score

The Air Route of Migration Score is obtained by multiplying lines A and B and dividing this by 7.80 to give a score between 0 and 100.

Total Air Route of Migration Score: 0

IV. DIRECT CONTACT ROUTE SCORE SHEET

Rating Factor	Assigned Value (Choose One)	Score

A. Residential Population

1. Toxicity — 0 3 6 9 — [ ]

2. Targets

a) High Risk Population (count x 8, max. 100) — _____

b) Total Resident Population (count x 2, max. 100) — _____

c) Sensitive Environment — 0 10 15 20 25 — [ ]

Resident Target Score (lines 2a + 2b + 2c, max. 100) — _____

Total Residential Population Score	0

B. Nearby Population

1. Likelihood of Exposure (matrix score) — 1

a) Area of Contamination — 0 25 50 75 (100) — 100

b) Accessibility/ Frequency of Use — 5 25 50 (75) 100 — 75

2. Toxicity — 0 3 6 (9) — 9

3. Targets (max. 100) — 42

Total Nearby Population Score	378

Overall Population Exposure Score

The Overall Population Exposure Score is determined by adding lines A and B and dividing this by 18 to give a score between 0 and 100.

Total Population Exposure Route of Migration Score: 21

DOCUMENTATION RECORDS
FOR
STATE HAZARD RANKING SYSTEM

INSTRUCTIONS: Briefly summarize the information you used to assign a score to each factor and document the source of the information and/or the rationale for each score.

Facility Name: Clayton Farms

ID Number: NONCD0002852

Location: 1833 Loop Road

Date Scored: 07/7/2011

Person Scoring: John Walch

Factors Not Scored: Air Route, Residential Poplulation

Comments:

References:

1. Clayton Farms State Superfund Section File, Raleigh, NC
2. North Carolina Atlas , University of NC Press, Chapel Hill, NC, 1975.
3. Rainfall Frequency Atlas of the US, Technical Paper 40, US Department of Commerce, Washington, DC, 1963.
4. ~~2000~~ 2010 Census of Population and Housing: Summary Population and Housing Characteristics: North Carolina, US Department of Commerce. http://quickfacts.census.gov/qfd/.
5. Dangerous Properties of Industrial Materials , N. Irving Sax, Van Reinhold Company, Inc., 1984.
6. 40 CFR 300 , Appendix A, July 1, 1988.
7. Johnston County NC GIS Website http://www.johnstonnc.com
8.

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GROUND WATER ROUTE

		Reference
A.	Route Characteristics:	
	1. Depth to Water Table:	
	8: Contamination in groundwater	(1)
	2. Net Precipitation:	
	2: 48in. mean annual precip. - 41 in. mean annual evap. = 7 in.	(2)
	3. Hydraulic Conductivity of Unsaturated Zone:	
	2: Piedmont	(1)
	4. Physical State:	
	3: Liquid	(1)
B.	Containment:	
	3: No containment	(1)
C.	Waste Characteristics:	
	1. Toxicity/Persistence:	
	18: Pesticides including DDT and Toxaphene	(1, 5)
	2. Hazardous Waste Quantity:	
	5: Quantity unknown	(1)

SURFACE WATER ROUTE

		Reference
A.	Route Characteristics:	
	1. Facility Slope and Intervening Terrain:	
	0: Facility slope and terrain less than 3%	(1, 7)
	2. One-year 24-hour Rainfall:	
	2: One year 24-hr rainfall = 3.1 inches	(3)
	3. Distance to Nearest Surface Water/Name:	
	8: Location of contamination unknown. Agricultural fields within 200 ft of on-site pond based on aerial photo.	(1, 7)
	4. Physical State:	
	3: Liquid	(1)
B.	Containment:	
	3: No containment	(1)
C.	Waste Characteristics:	
	1. Toxicity/Persistence:	
	18: Pesticides including DDT and Toxaphene	(1, 5)
	2. Hazardous Waste Quantity:	
	5: Quantity unknown	(1)

AIR ROUTE

Reference

A. Waste Characteristics: **NOT SCORED**

1. Reactivity and Incompatibility:

( )

2. Toxicity:

( )

3. Hazardous Waste Quantity:

( )

B. Targets:

1. Population within 4-mile Radius/Distance from Hazardous Substance:

( )

2. Distance to Sensitive Environment:

( )

3. Land Use:

( )

POPULATION EXPOSURE ROUTE

Reference

A. Residential Population: **NOT SCORED**

1. Toxicity:

( )

2. Targets:

a. High Risk Population:

( )

b. Total Resident Population:

( )

c. Sensitive Environment:

( )

B. Nearby Population:

1. Likelihood of Exposure Score:

a. Area of Contamination:

100: Area of contamination unknown. property is 39.27 acres, assume 1/3 contaminated (1, 7)

b. Accessibility/Frequency of Use:

75: Observed contamination on land with no continuous barrier to entry (1)

2. Toxicity:

9: Pesticides including DDT and Toxaphene (1, 5)

3. Targets: 0.1 (167.44) + 0.05 (502.32) = 41.86 ---> 42

a. 0 - ½ mile: 3.14 (0.5^2)x 213.3 $people/_{sq.mi}$ = 167.44 (4)

b. ½ - 1 mile: 3.14 $(1^2 - 0.5^2)$x 213.3 $people/_{sq.mi.}$ = 502.32 (4)

Notes:

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